patient gender division: 106 women (70.7%, mean age 42 years) and 44 men (29.3%, mean age 48 years). The reasons why so often both genders are attending MRI associated by CNS disease (32.7%), spinal disease (32%)and bone-joint system diseases (16.7%). 46% of patients didn't feel any discomfort during MRI procedure, but 54% of patients felt some discomfort using MRI, while women associate the discomfort with noise more often (p=0.036). The machine noise and lying still were mentioned by patients as more frequent reasons of discomfort, as well as claustrophobia was noted. Women are afraid of MRI more often (p=0.05) but men are sedated before MRI screening more frequent (p=0.009). Also, men tend to sleep during MRI (p=0.062). There is statistically significant correlation by age groups (Spearman's rho) between the expressions of discomfort and age: the older women mentioned the general discomfort (p=0.01), headaches / dizziness (p=0.013) and unpleasant vibration feeling (p=0.023). Women have panic attacks more often (p=0.001), they also tend to take sedatives more frequent than men (p=0.08). 94% of patients never had unterminated MRI because of the subjective discomfort. It is proved correlation between magnetic field strength, medical staff working day and acute transient symptoms as dizzinessor metallic taste in the mouth: the stronger magnetic field or a longer shift, the more intensive symptoms will be developing. **Conclusions.** The most part of patients notes discomfort during MRI, which can be reduced by different ways. The most popular way to avoid it is to sedate patient or give him earplugs. These methods are quite effective but it is necessary to improve the cooperation of doctor-patient that is proven as one of the most effective methods.

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## THE USE OF EYE TRACKING METHOD FOR WELL-BEING OF COMPUTER USERS

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ИСПОЛЬЗОВАНИЕ ОКУЛОГРАФИИ ДЛЯ СОХРАНЕНИЯ ЗДОРОВЬЯ ПОЛЬЗОВАТЕЛЕЙ КОМПЬЮТЕРОВ. **Гринберга С.** Рижский университет им. Страдыня, ул. Дзирциема, 16, Рига, Латвия, LV-1007

**Key words:** *eye tracking; software ergonomics; well-being*
**Ключевые слова:** *окулография; эргономика программного обеспечения; благополучие*

The increased use of information technology at work can affect computer users' wellbeing in different ways. The most common health disturbances of computer users are musculoskeletal problems, visual discomfort, as well as stress-related disorders. Undoubtedly, a great role is played by physical ergonomics, in how correctly or incorrectly the monitor, keyboard, the table, the chair or document holderis positioned. Computer mice and keyboard design are also important, i.e. how easy it is to work with it. However, no less important is the role of software ergonomics, where the software usability is central. Poorly designed software can be extremely annoying to users; it can cause stress that contributes to both muscle tension and dissatisfaction with the work that can contribute to various psycho-physiological changes in the employee's body. To improve the well-being of the employee, to increase job satisfaction, as well as positive emotions and mindfulness, software ergonomics must be improved. Various subjective and objective usability studies are carried out for this purpose. Eye tracking is one of the usability testing methods which helps understand the user experience while using information and communication technologies. Eye tracking shows the **instantaneous** reactions of computer users, as well as the dispersion of their attention in an interface. Eye tracking can be used with a variety of other research methods, such as observations, interviews, and retrospective think aloud. However, eye-tracking, as an objective study method provides much more information about the user than other subjective methods, such as the retrospective think aloud method. The reason for this is that the test participant may not remember his activities during the test, because behavior is unconscious, or they are quickly forgotten, or they cannot verbalize the reasons for their behavior.Whereas through examination of eye tracking data, visualisations and replays the causes for behavior can be found more precise and specific.In eye tracking of special interest are points of "**fixation**" — areas in which a user's gaze stops moving and "**saccade**" — the movement of a user's eyes between fixation points. The data of eye tracking can be visualised and interpreted to **reveal** behaviour that is otherwise invisible, including: an ordered list of fixations which shows what the user sees; an unordered list of unnoticed elements, which shows what the user does not see; time to reach any fixation This may be related to how easy or difficult it is to find the element; fixation time which may be related to how appealing or comprehensible an element might have been; the number of fixations per element which can be related to how confusing, useful or inconsistent an element might have been. It is important that the eye tracking method can provide data that would be considerably more difficult to obtain with other testing methods.

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## ASSESSING EXPOSURE TO OCCUPATIONAL CHEMICALS IN LARGE-SCALE EPIDEMIOLOGICAL STUDIES ON OCCUPATIONAL CANCERS

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ОЦЕНКА ВЛИЯНИЯ ХИМИЧЕСКИХ ВЕЩЕСТВ НА ПРОИЗВОДСТВЕ В ШИРОКОМАСШТАБНОМ ЭПИДЕМИОЛОГИЧЕСКОМ ИССЛЕДОВАНИИ РАКОВЫХ ПРОЦЕССОВ, ОБУСЛОВЛЕННЫХ ПРОФЕССИОНАЛЬНЫМИ ВРЕДНОСТЯМИ. **Ханс Кромхут.** Институт исследований по оценке риска, Университет Утрехта, ул. Ялелаан, 2, Утрехт, Нидерланды